



## Florida's Turnpike Enterprise Steers to Success with Informatica

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— Bob Hartmann, IT director, Florida Turnpike Enterprise

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### FAST FACTS

#### BUSINESS INITIATIVES

- Prepare the highways for emergency situations, such as hurricanes, tornadoes, and flooding
- Provide accurate, timely, and available data concerning traffic volumes and toll collection money to determine toll revenues
- Deliver data required for SUNPASS prepaid toll program
- Minimize total cost of ownership

#### TECHNOLOGY STRATEGY

- Use Informatica PowerCenter to replace hundreds of individual load and transform programs and automate the entire data processing stream. Informatica's platform is the foundation for FTE's Competency Center, providing the methodology and best practices for a fast, consistent business intelligence implementation. Simultaneous use of the Informatica high-availability solution supports uninterrupted data integration.

### Consider the Florida Turnpike Enterprise Dilemma

Operating every toll road and bridge owned by the Florida Department of Transportation, Florida Turnpike Enterprise requires accurate, timely, and uninterrupted reports on everything from traffic volumes and toll collections to emergency evacuation programs in times of crisis. Unfortunately, the data behind these reports took up to three months to compile to reach the appropriate management teams, and by the time it reached them its reliability was open to question.

As part of a large-scale, high-availability business intelligence and data warehousing implementation, FTE is using the Informatica® platform to support fact-based decisions through comprehensive dashboards. Business intelligence has proven to be a valuable tool for simultaneously driving profit while improving customer service and one that has restored the organization's faith in enterprise reporting.

Timely and accurate traffic, revenue, and participation reports are now ready in a high-availability environment in as little as four hours, compared with up to three months previously. The solution also supports the effort to make drivers' journeys as safe and as quick as possible during emergency evacuations. The Florida Turnpike Enterprise expects to achieve a return on investment in less than 12 months. It is now using this business intelligence solution to continuously drive its performance to become a true state agency leader.

## BENEFITS

- Reduced time required to run critical reports on issues such as revenue, traffic, violations, and safety from up to three months to four hours
- Helped FTE better manage and understand data and speed decision making
- Enhanced visibility into mission-critical information to improve disaster readiness
- Saved money by better tracking and aligning resources
- Expected to deliver complete return on investment in less than 12 months
- Freed up time/resources for Quality Assurance (QA) and ad hoc requests from business
- Helped make drivers' journeys as safe and quick as possible during emergency evacuations
- Provided central point of truth for traffic and revenue information
- Introduced high-availability business intelligence data warehouse over stretch clusters, with long-distance stretch mirrors (190 miles)

## NUTS AND BOLTS

- Products: Informatica PowerCenter Advanced Edition, including Informatica Metadata Manager and Informatica Enterprise Grid and High Availability options; PowerExchange® for Oracle and SQL Server
- Services: Informatica Professional Services<sup>SM</sup>
- Solutions: Enterprise Data Warehousing, Business Intelligence, ICC
- Sources: Hundreds of toll-related data sources across Florida
- Target: Enterprise-wide business intelligence platform
- Platform: Sun

With 460 miles of toll highways, Florida's turnpike system includes the Mainline from Miami to Central Florida, as well as a host of other expressways and parkways. On average, 1.8 million motorists use Florida's turnpike each day. An innovative experiment combining the best of both the government and business worlds, Florida's Turnpike Enterprise (FTE) is now responsible for the operation of every toll road and bridge owned by the Florida Department of Transportation (FDOT).

FTE has unique challenges. Besides the need to support drivers using the highways for business or to reach one of the state's leisure destinations such as Disney World or the coast, it also needs to be prepared for emergency situations, including hurricanes, tornadoes, and flooding that frequently hit the state. All of this means the FTE management needs highway reports readily available to make fact-based decisions. For example, FTE requires accurate, timely, and highly-available data concerning traffic volumes and toll collection money to determine current and forecast toll revenues; the SUNPASS-prepaid toll program is funded by bonds, which in turn are serviced by toll revenue; toll violations need to be tracked; and the airports across the state require data on traffic volumes using the local freeways.

Meanwhile, it is critical for emergency evacuation usage to be reported. During an emergency such as a hurricane striking the region, FTE needs to report to FDOT and emergency management teams on how the evacuation is proceeding, what the revenue losses are when an emergency is declared (no tolls are collected during such state emergencies), and safety reports.

## New Technologies Require a Short Return on Investment

The technology that underpins this reporting strategy also needs to be implemented and operated as efficiently as possible. "As a public sector organization, FTE must strive to do more with less," says Bob Hartmann, IT director, FTE. "However, implementing the right technologies for business and IT is the challenge, especially in times of reduced budgets. New technologies must have a very short return on investment, while simultaneously offering reduced total cost of ownership."

Against this backdrop, reporting was a process that sometimes crept to its destination as slowly as the freeway traffic during Monday morning commutes. It used to take up to one month to collect more than a billion rows of data from multiple disparate systems, deduplicate the data, and organize information on traffic, revenue, and highway participation. And that was just the monthly reports. Annual reporting could take several months to compile, which led to concerns regarding the reliability of the data. There were also concerns surrounding data availability. When disruptions occurred because of a natural disaster or an accident such as highway construction workers cutting through power lines, it was likely the business would be unable to receive the data required for the reports.

In a breakthrough development for a state agency, FTE has launched a comprehensive, high-availability business intelligence solution, based on a data warehouse. It includes data on almost every aspect of FTE's operations, spanning 460 miles of highway, 270 miles of guardrail, 770 miles of fencing, 10,350 highway lights, 21,000 signs, and 500 toll booth air conditioners. The business intelligence reference architecture consists

of a 26-terabyte Oracle RAC production database in a clustered, failover environment, with Cognos 8 Business Intelligence.

Informatica PowerCenter® Advanced Edition™, including Informatica Metadata Manager and Informatica Enterprise Grid Option™ and High Availability Option™, structures and automates the entire data processing stream. Replacing hundreds of individual load and transform programs, Informatica PowerCenter performs data extract, transform, and load (ETL) between the staging area, which includes Oracle databases containing customer data, traffic volumes, and revenue, and the operational data store, where the data is reconciled, deduplicated, and standardized. Informatica technology also performs ETL into the data warehouse (which provides FTE with a multidimensional, monthly summary of historical data) or straight to a series of data marts.

## Dashboard Reporting on Toll Revenue, Traffic, Violations, and Safety

The result is a series of dashboards based on timely, accurate data concerning such critical issues as toll revenue, traffic, violations, and safety. This business intelligence helps FTE better manage and understand mountains of data and speeds decision making; it also helps the business gain visibility into mission-critical information to improve disaster readiness and saves money by better tracking and aligning resources. “Informatica is playing a key role in increasing efficiency,” explains Chuck F. Shelton, financial services IT program manager, FTE. “Whereas it used to take up to one month to process and present the reporting information, we can now achieve that in about four hours. We can also use the same process for any time period, including YTD and annual reporting periods. This accelerated decision making is helping to drive profit and improve customer service.”

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One example of the many innovations made possible by Informatica is the implementation of a federal High-Occupancy Toll (HOT), a lane that any driver can pay to use. Florida is one of the first states to introduce a HOT service and the Informatica data warehouse provides FTE with daily reports on the progress of the project and toll revenues to the Florida State Transportation Agency, the Florida Governor, and the FDOT Agency. “Had we not used a high-availability Informatica solution, we would not have been able to adhere to the reporting requirements within the contract,” says Shelton. “The FDOT also wants to use the Florida Turnpike reports as the model for other states.”

So how does this leading business intelligence solution stack up against the IT director’s stated aim to “do more with less”? According to Shelton, a 26-terabyte data warehouse might typically require a team of more than 50 to develop and implement. In this case, the FTE data warehouse took just two full-time equivalent (FTE) data analysts to complete. “The secret to maintaining such a small number of staff is the automation Informatica provides. Overall, we expect a complete return on our Informatica investment in less than 12 months. That is a great purchase justification in this economic climate as we all do more with less.”

## Informatica Supports Long-Distance Stretch Clusters/Mirrors

High availability was a key driving factor for the infrastructure. FTE is taking advantage of a highly resilient infrastructure consisting of Oracle RAC databases, long-distance stretch clusters, and long-distance stretch mirrors. The PowerCenter High Availability Option supports this infrastructure, automatically applying high-availability features to FTE's PowerCenter data integration. This helps guard against FTE platform service outage, ensures data uptime, and reduces the costs and risks associated with data downtime. The high-availability solution is notable for the fact that the clustered, extended mirror environment reaches across more than 190 miles (one data center is in Boca Raton, the other is in Orlando). "This is a mission-critical deployment and the PowerCenter High Availability Option is an important tool in strengthening our data continuity," says Shelton.

## Informatica Competency Center Helps Maximize Operational Efficiency

The people, systems, and business processes associated with this high-availability data warehouse are connected using an Informatica Competency Center (ICC). Two of the founding goals of the business intelligence strategy were to maximize operational efficiency, while minimizing the cost of the technology implementation, and the ICC supports these with the reuse of leverageable components, knowledge management, and FTE's best practices.

"The Informatica platform is the ideal technology foundation for our ICC, because it provides the methodology and best practices for a fast, consistent business intelligence implementation," says Susan Canegalli, manager of business intelligence at the Competency Center. "From a management perspective, the ICC reduces costs and improves the quality and consistency of critical information. The benefits are equally impressive from a technology perspective. The ICC helps FTE identify and implement core processes for the Cognos and data mart delivery, while at the same time it maximizes knowledge sharing across the business."

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### LEARN MORE

Learn more about PowerCenter and the entire Informatica Platform. Visit us at [www.informatica.com](http://www.informatica.com) or call 800.653.3871.

### ABOUT INFORMATICA

Informatica enables organizations to operate more efficiently in today's global information economy by empowering them to access, integrate, and trust all their information assets. As the independent data integration leader, Informatica has a proven track record of success helping the world's leading companies leverage all their information assets to grow revenues, improve profitability, and increase customer loyalty.



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